Material Safety Data Sheet

Dioctyl Adipate

CREATION DATE: 05/28/2007 REVISION DATE: 02/24/2015

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

a) Product Name: DOA(Dioctyl Adipate)

b) Recommended use of the chemical and restrictions on use:
- **Recommended use : Hoses, Leather, Sheet**
- **restrictions on use : no data available**

c) Manufacturer/Supplier/Distributor Information
- **Name: LG Chem, Ltd.**
- **Address**
  Ulsan Plant : 388, MANGYANG-RI, ONYANG-EUP, ULJU-GUN, ULSAN-CITY 689-901, KOREA
- **Emergency phone number : 82-52-231-4062**

SECTION 2 HAZARDS IDENTIFICATION

a) Hazard/Risk Classification
- **Chronic aquatic toxicity : Category 2**

b) Label elements including precautionary statements
- **Symbol :**

- **Signal Word : Warning**
- **Hazard/Risk Statement :**
  H361 can cause damage to baby and organ ability
- **Precautionary Statement : no data available**
  Precaution
  P201 get a instruction manual before use
  P202 don`t use before read safe,precautionary statement and understand it
  P281 wear the private protector
  Correspondence
  P308+P313 if you worry about contact and exposure, receive the medical advice
  Storage

P405 store locked up

Detroy

P501 (following relative rules)destroy contents and receiver

c) Other Hazard/Risk which are not included in the classification criteria (e.g. dust explosion hazard):

- NFPA RATINGS (SCALE 0-4): HEALTH=0 FIRE=1 REACTIVITY=0

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name Other name CAS number or Other identification number Content (%)

Chemical Name	Trade name/Synonym	CAS number	Content(%)
Dioctyl Adipate	hexanedioic acid, bis(2-ethylhexyl) ester	103-23-1	100

SECTION 4 FIRST AID MEASURES

a) Eye contact:

Wash eyes immediately with large amounts of water
If easy to do, remove contact lenses.
Get medical attention if symptoms persist.

b) Skin contact:

Remove contaminated clothing and shoes immediately.
Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes).
Get medical attention if symptoms persist.

c) Inhalation:

If symptomatic, move to fresh air immediately.
Get medical attention if symptoms persist.

d) Ingestion:

Seek medical advice.

e) Indication of immediate medical attention and notes for physician : no data available

SECTION 5 FIRE FIGHTING MEASURES

a) Suitable (and unsuitable) extinguishing media:

- Suitable extinguishing media : Dry chemical, carbon dioxide, water spray or regular foam
- Unsuitable extinguishing media : no data available
- Large fires : water, smog or regular foam

b) Specific hazards arising from the chemical
- Thermal decomposition products : can include toxcity and noxious gas
- Risk of fires and explosion : heat and spark can cause light fires

c) Special protective equipment and precautions for fire-fighters:
Full firefighting turn-out gear (bunker gear).
Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.
Any self-contained breathing apparatus with a full facepiece.

SECTION 6 ACCIDENTAL RELEASE MEASURES

a) Personal precautions, protective equipment and emergency procedures:
Stop leak if you can do it without risk.

b) Environmental precautions and protective procedures: no data available

c) Methods and materials for containment and cleaning up:
- For Small spills: Absorb with sand or other non-combustible material.
Collect spilled material in appropriate container for disposal.
Keep unnecessary people away, isolate hazard area and deny entry.
- For Large spills : Flush spill area with water spray. Prevent run off from entering drains, sewers, or steams.

SECTION 7 HANDLING AND STORAGE

a) Precautions for safe handling: no data available.
No special precautionary health measure should be needed under anticipated conditions of use.

b) Conditions for safe storage (including any incompatibilities): Keep container closed.

SECTION 8 EXPOSURE CONTROLS & PERSONAL PROTECTION

a) Control parameters (e.g. occupational exposure limit values, biological limit values):
No occupational exposure limits established by OSHA, ACGIH, or NIOSH.

b) Appropriate engineering controls:
Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

c) Personal protective equipment
- Respiratory protection:
Under conditions of frequent use or heavy exposure, respiratory protection may be needed.
Respiratory protection is ranked in order from minimum to maximum.
Consider warning properties before use.

Any chemical cartridge respirator with organic vapor cartridge(s).
Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).
Any air-purifying respirator with a full facepiece and an organic vapor canister.

- Eye protection: Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

- Hands protection: Wear appropriate chemical resistant gloves.

- Body protection: Wear appropriate chemical resistant clothing.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance (physical state, color etc): colorless to pale yellow, oily liquid
b) Odor: almost odorless
c) Odor threshold: no data available
d) pH: no data available
e) Meting point/freezing point: -90 F (-68 ℃)
f) Initial boiling point and boiling range: 783 F (417 ℃)
g) Flashing point : 414 F (212 ℃)
h) Evaporation rate: no data available
i) Flammability Class(OSHA): IIIB
j) Upper/lower flammability or explosive limits: 0.4% (242℃)/no data available
k) Vapor pressure: 2.5 mmHg @ 200℃
l) Solubility: insoluble(water)
m) Vapor density: 1.21
n) Relative density: 0.927
o) Partition coefficient: n-octanol/water: no data available
p) Auto-ignition temperature: 711 F (377 ℃)
q) Decomposition temperature: no data available
r) Viscosity: 14cP @ 20℃
s) Formula mass: 370.57

SECTION 10 STABILITY AND REACTIVITY

a) Chemical stability and possibility of hazardous reactions:
Stable under normal temperatures and pressures.
Hazardous polymerization has not been reported to occur under normal temperatures and pressures.

b) Conditions to avoid (e.g. static discharge, shock or vibration, etc):
May burn but does not ignite readily. Avoid contact with strong oxidizers, excessive heat, sparks or open flame.

c) Incompatible materials:

Strong oxidizers : fire & exposure risk

d) Hazardous decomposition products:
Thermal decomposition may release carbon oxide.

SECTION 11 TOXICOLOGICAL INFORMATION

a) Information on the likely routes of exposure:
Cause the diarrhea and irritation. There is no information about the critical side-effects.

b) Health hazards information
- Acute toxicity :
Oral : LD50 9100 mg/kg Rat
Percutaneous : LD50 8410 mg/kg Rabbit
Inhalation : no data available.
- Skin corrosive/irritant: Can cause the a little irritation when it is exposed for 24hr on rabbit skin
- Serious eye damage/eye irritation: Not irritating(rabbit)
- Respiratory sensitization: no data available,
- Skin sensitization: Human : Guinea Pig : Not sensitizing
- Carcinogenicity: Limit evidence at animals(IARC Group3)
- Germ Cell Mutagenicity : Somatic in vivo mutagenicity test - negative
- Reproductive toxicity : The rat experiment group(12,000ppm dose) in pragnent period compare with comparison group decrease the weight, food consumption and a number of babies, but there is no effect about rate of baby`s survival. White rat`s teratogenic test is reported to showing the ureter deformity that depand on the quantity in the animal`s second generation
- Specific target organ toxicity (single exposure): no data available.
- Specific target organ toxicity (repeated exposure): no data available.
- Aspiration hazard: no data available.

SECTION 12 ECOLOGICAL INFORMATION

a) Aquatic and terrestrial ecotoxicity: no data available.

b) Persistence and degradability: no data available.

c) Bioaccumulative potential : no data available.
- biodegradability : 71 (%)
- condenasability : BCF 27 28days (Lepomis macrochirus(fish, fresh water), 0.25mg/ℓ))

d) Mobility in soil : no data available.

e) Other adverse effects: no data available

SECTION 13 DISPOSAL CONSIDERATIONS

a) Disposal method: Incinerate :
Discharge, treatment, or disposal may be subject to national, state or local laws.

b) Disposal precaution (including the disposal method of contaminated container and packaging):
Discharge, treatment, or disposal may be subject to national, state or local laws.

SECTION 14 TRANSPORT INFORMATION

a) UN number: no classification
b) UN proper shipping name: N/A
c) Transport hazard class: N/A
d) Packing group (if applicable): N/A
e) Marin pollution (yes/no): N/A
f) Special precaution which a user to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises: N/A

SECTION 15 REGULATORY INFORMATION

a) Industrial Safety and Health Act: no data available
b) Toxic Chemical Control Act
- U.S. REGULATIONS

TSCA inventory status:	**Listed.**
TSCA 12b export notification:	**Not listed.**

c) Dangerous Material Safety Control Act: no data available.
d) Wastes Management Act: no data available
e) Other requirements in domestic and other countries: no data available

SECTION 16 OTHER INFORMATION

a) Information source and references:
International Uniform Chemical Information Database(IUCLID)(http://ecb.jrc.it/esis)
TOXNET, U.S. National Library of Medicine(http://toxnet.nlm.nih.gov)
ECB-ESIS(Eurpean chemical substances Information System)(http://jrc.it/esis)
The Chemical Database, The Department of Chemistry at the University of Akron (http://ull.chemistry.uakron.edu/erd)
b) Issuing date: 05/28/2007
c) Revision number and date: 7th Revision 02/24/2015
d) others: -

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